Missouri Department of Natural Resources
OPERATOR CERTIFICATION SECTION

Regionalization and Consolidation in Missouri – Two Perspectives; One Viewpoint

Missouri communities do an outstanding job meeting the challenges of providing abundant, safe drinking water as well as wastewater services at a reasonable cost. Missouri has some of the highest compliance rates with federal and state water regulations.

There are many challenges, including aging infrastructure, technical and administrative resource limitations and affordability in the face of rising costs. While many options exist to address these challenges, regionalization and consolidation (R&C) can be an effective and successful way communities can address their drinking water and wastewater challenges.

A Wastewater Perspective

Regionalization involves sharing physical infrastructure in a defined geographic area when a political or private entity provides wastewater service by physically connecting existing and future communities to a regional or central plan. Examples of regionalization include a sewer district connecting the flows of three privately-owned treatment facilities to a centralized facility, and a municipality connecting several small facilities by extending a sewer line. Reduced user rates and operational costs are two benefits achieved when multiple entities work together.

Consolidation is the centralized ownership of multiple facilities. Typically, this involves the sale of a small, independent facility to a specialized wastewater operating company. The clear advantage with consolidation is a decrease in costs to users. Simply stated, there are more customers to share the burden of paying the bills. Small wastewater system owners are able to relinquish the burden of costs, regulatory obligations and requirements associated with the wastewater system. Consolidation often achieves higher levels of operating performance and rates of regulatory compliance, which not only benefits customers but also the water quality in the community.

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In 2019, the Missouri Department of Natural Resources began offering the Clean Water State Revolving Fund Regionalization Incentive Grant. This grant is available to certain municipalities in Missouri who have the capacity to accept and treat wastewater from proposed connection(s). If approved, the grant will fund 100% of eligible costs for the project, including planning, designing and constructing the sewer connection.

A Drinking Water Perspective

The department's Water Protection Program is also committed to ongoing efforts to promote more efficient, resilient and sustainable drinking water infrastructure across Missouri. Regionalization, consolidation and unification (RCU) can be cost-effective approaches to obtaining and maintaining technical, managerial and financial capacity at public drinking water systems.

RCU may require voter approval, engineering and construction, legal documentation, and negotiation and cooperation. These partnerships can offer solutions for systems with declining populations and revenues, aging infrastructure and staffing difficulties. The benefits are worth the effort.

Drinking water systems can benefit from regionalization, or the interconnection between two or more drinking water systems where one primary system provides water to the others. Each water system operates and maintains its own distribution system. Many municipalities and regional water districts have extra capacity and may be willing to contract with a smaller system to provide drinking water. This can lead to a reduction in source water and treatment costs for the consecutive system and an increased customer base for the primary system.

When drinking water systems consolidate, a system transfers its operating authority and ownership to another system, and the two become one system. Examples include multiple drinking water systems combining to form a regional water district or a municipality providing service to a subdivision outside of its boundary. Thanks to greater accessibility to managerial and financial resources, economies of scale and enhanced flexibility, the combined system may be able to provide water to customers at a lower cost.

Unification occurs when an independent drinking water system transfers ownership to a larger one. This can happen through the sale of a small drinking water system to a specialized water operating company. There is no change to the smaller system's distribution system, but operating under a unifying system allows them to join a larger customer base. The larger system takes on the regulatory responsibilities and the costs of operating, maintaining and improving the smaller drinking water system. The owner and customers of unified systems typically experience better compliance rates and operating performance.

Some of Our Successes

Jefferson and Franklin counties were home to five abandoned wastewater treatment systems. The systems were not maintained or upgraded, and the result was discharging sludge into receiving streams. These five facilities remained out of compliance for more than five years before Jefferson County Sewer District purchased them in 2019.

Three inadequately operated and maintained wastewater treatment facilities provided wastewater services to Terre du Lac Subdivision in St Francois County. The lack of operation and maintenance led to residential complaints and social media posts about raw sewage in a nearby lake. Failure to conduct maintenance and upgrade these systems over time resulted in non-compliance with Missouri's Clean Water Law. Central States Water Resources, operating as Confluence Rivers Utility Operating Company, purchased these facilities, and they are working to bring them back into compliance.

In Stone and Barry counties, a development company began construction of wastewater treatment facilities to serve four small subdivisions on the south shore of Table Rock Lake. Unfortunately, the developer used substandard materials and upon completion of construction,

failed to obtain the necessary operating permits. Due to the 2009 economic downturn, the wastewater treatment systems lacked an appropriate operator and in 2016, residents began complaining about poor wastewater treatment system conditions. In 2020, Ozark Clean Water Company took ownership of the four facilities and is taking steps to bring these systems into compliance.

Ridge Creek Water Company was a private utility that owned and operated a drinking water system with 22 wells. The city of St. Robert annexed this system and is now the owner. With this consolidation, there is a properly certified chief operator at the system. St. Robert plans to make infrastructure improvements in the future to improve water quality and mitigate violations.

Rogue Creek was a community water system with lead in its source water and was in a prolonged receivership. Missouri American Water Company took over as a contract operator and eventually acquired the system. The customers of the unified system, Missouri American Rogue Creek Utilities, benefit from infrastructure improvements to both the drinking water and wastewater systems. Since Missouri American Water Company's acquisition, no additional lead action level exceedances have occurred.

Missouri American Hickory Hills was a community water system that recently connected to neighboring California Public Water Supply (PWS). Thanks to this regionalization, California PWS has a more reliable and redundant water source, along with an increased customer base, which equates to a more cost effective option for customers. Missouri American Hickory Hills retains their distribution system and has their well, storage and treatment system available in case of emergency.

Financial Opportunities

When systems consolidate or regionalize, they increase their financial capacity and may be eligible to apply for financial assistance programs, such as the State Revolving Fund (SRF) loans. The department's Financial Assistance Center administers both the Clean Water SRF and the Drinking Water SRF. The Clean Water SRF provides low-interest loans for wastewater treatment, sewer rehabilitation and stormwater quality improvements, while the Drinking Water SRF provides low-interest loans for drinking water infrastructure projects including upgrades to existing distribution and storage facilities.

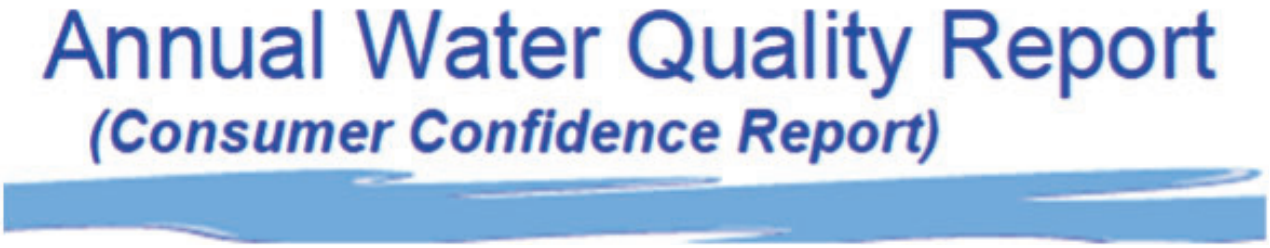
The department also offers Engineering Report Services Grants (ERSG). Eligible systems can use this grant to explore options for regionalization, consolidation or unification. The U.S. Department of Agriculture-Rural Development also has loan and grant programs available to community public water systems. The Special Evaluation Assistance for Rural Communities and Households grant helps small, financially distressed rural communities with predevelopment feasibility studies, design and technical assistance on proposed water projects.

Need More Information?

For information and resources on the department's regionalization and consolidation efforts for wastewater and public drinking water systems, please visit the Water Protection Program's webpage. This webpage also includes facts sheets on regionalization and consolidation efforts, one titled "Wastewater Consolidation and Regionalization at a Glance" and the other titled, "Drinking Water Consolidation, Regionalization, and Unification at a Glance." For more information about the department's Clean Water and Drinking Water State Revolving Fund, visit the Financial Assistance Center's webpage.

America's Water Infrastructure Act for Public Water Supplies

America's Water Infrastructure Act (AWIA) Section 2013 requires community drinking water systems, serving 3,301 to 49,999 people, to develop or update risk assessments and emergency response plans. The law specifies the components that the risk assessments and response plans must address and requires water systems to certify completion of the updates to the US Environmental Protection Agency (EPA). The certifications were due to EPA by June 30, 2021. For more information, including how to submit past-due certifications, please visit the EPA's America's Water Infrastructure Act website.



Annual Water Quality Report (Consumer Confidence Report)

Please share this information with the person responsible for distributing your water system's Consumer Confidence Report (CCR).

Take steps to make sure the annual CCR requirements are met. Last year, many water systems used the electronic delivery method to reduce printing and postage costs associated with distributing their CCR. This option allows direct delivery of the CCR to customers electronically through the internet by providing a unique web address, known as a Uniform Resource Locator (URL), to customers via a utility bill, newsletter or other means. To meet direct delivery requirements, the URL must go directly to the full and complete CCR for that year. The water system must also inform all customers, in the same notification, that the CCR is available upon request in a paper copy format to reach customers who do not have internet access. Once provided to customers, the water system must then return a copy of the distributed CCR, the certification form and required supporting documentation to the department to receive credit for completing the annual CCR requirements.

To assist with these efforts, the department generates a "skeleton" CCR with system information and water quality results for all community water systems. The CCRs are hosted, free of charge, on the department's website providing a unique web address for systems to access the most recent water quality report. The web address, or URL, is unique to each water system and is accessible by visiting the Drinking Water Reports webpage, replacing "**MO0000001**" with the public water system's identification number. The department updates the CCRs in April of each year to reflect the water quality report for the previous calendar year. If a water system was supplied by an out-of-state provider or an outside laboratory performed additional testing not reported to the department, the system must add the results to the "skeleton" CCR before distribution to customers.

The department, with assistance from the Missouri Rural Water Association, developed a video to help community water systems with CCR distribution and certification using electronic delivery. The video explains the CCR, where to find the department generated, online "skeleton" CCR for each water system and what must be done in order to make the CCR available to customers.

The department encourages all water systems to take advantage of the tools and information provided on the CCR homepage. The following table shows the actions required and deadlines for reporting.

Deadline	Action Required
April 1	***Reseller Report to Consecutive Systems ("Skeleton" CCR posted on the DNR website)***
July 1	***CCR Distributed to Customers***
Oct. 1	***CCR Certification Form Returned to DNR***

The department will be using an automated call system to remind systems of important upcoming deadlines. Systems received an automated call during June reminding them of the July 1 deadline to distribute the CCR to their customers. Additionally, systems that have not yet returned their CCR Certification Form will receive an automated call during September reminding them of the Oct. 1 deadline to submit this certification to the department.

Systems that fail to meet these distribution requirements or reporting deadlines will receive violations according to CSR 60-8.030. If you have questions about this process, need to request changes to your CCR or prefer to use your own URL, please email the department at CCR@dnr.mo.gov or contact the department's CCR Coordinator at 573-526-3832.

Sample Language for Electronic Delivery

Your system may use this sample language for electronic delivery.

"The 2020 CCR is available at www.dnr.mo.gov/ccr/MO#######.pdf. For a paper copy please call ###-###-####."

Don't forget to change the language to your system's seven-digit PWS identification number (MO#######) issued by the state in the URL and the ten-digit water system phone number. After distributing the message to customers, return the certification form with supporting documentation to the department.

EPA Releases New Publication – Compliance Tips for Small, Mechanical Wastewater Treatment Plants

The EPA has a new publication titled, "Compliance Tips for Small Mechanical Wastewater Treatment Plants" available for owners and operators to reduce significant non-compliance. The five-page document focuses on common root causes of permit exceedances and offers operational solutions. It also discusses reporting requirements and includes a list of compliance and financing assistance resources.

Phosphorus Removal for Wastewater Treatment Facilities

Is your wastewater treatment facility struggling to meet phosphorus limits? Is the answer to add more chemicals to get more removal? Maybe! - - Maybe not!

After the treatment process removes phosphorus through chemical or biological methods, 5% of the Total Suspended Solids (TSS) is phosphorus. This means that to achieve a 0.5 mg/L phosphorous level, you will need reduce TSS levels to at least a 10 mg/L. If 5% of the TSS is phosphorus, any effluent above that 10 mg/L TSS, will exceed the phosphorus limit of 0.5 mg/L.

Most of the wastewater permits have a monthly average for TSS of 15 or 20 mg/L. These treatment plants may be achieving their TSS limit but are exceeding the phosphorus limit simply because 5% of the TSS is phosphorus.

Maybe adding more chemicals is not the solution. The answer may be, remove more TSS. Meeting a phosphorus limit of 0.5 mg/L is difficult without some kind of filter.

TSS Removal Requirements	P Limit (mg/L)	Max TSS (mg/L)
Since all but 0.05 mg/L of the soluble Phosphorus can be converted to TSS Phosphorus (Biologically and/or Chemically) and, because approximately 5% of Effluent TSS is Phosphorus, to meet a total-P limit, the effluent TSS needs to be kept to the max TSS number (in mg/L) shown in the table.	***0.1***	***1***
	0.2	***3***
	0.3	***5***
	0.4	***7***
	0.5	***9***
	0.6	***11***
	0.7	***13***
	0.8	***15***
	0.9	***17***
	1.0	***19***
	1.1	***21***
	1.2	***23***
	1.3	***25***

If you have questions, you can contact your local regional office and ask for the Water Specialist for wastewater assistance. E.C. West submitted this article. E.C is a Water Specialist with the department's Southwest Regional Office in Springfield.

Now Available - Submit Drinking Water Public Notification Documents Electronically

If a public water system receives a drinking water violation that requires public notification, the system must provide public notice in a form and manner reasonably calculated to reach all persons served in the required timeframe. When this situation arises, the Missouri Department of Natural Resources will provide instructions, a certification page and a sample public notice specific to each violation or event. These instructions and documents help systems comply with the Public Notice Rule and notifying the public. Upon request, the department can provide an electronic version of the public notice to your system.

After the water system has provided public notice, the system must return a copy of the distributed public notice and the completed certification to the department in order to fulfill the public notice requirement. This creates a record of what the system provided to the public and certifies the public notice was completed. To avoid an additional violation for failure to complete public notice, please submit documentation within seven days of notifying the public and retain a copy for your records for a minimum of three years.

The department encourages public water systems to submit completed public notification documents electronically to DWPublicNotice@dnr.mo.gov. You may also fax documentation to 573-751-3110 or mail to:

Missouri Department of Natural Resources
Water Protection Program
Public Drinking Water Branch
Attn: Public Notice Coordinator
P.O. Box 176
Jefferson City, MO 65102-0176

Please share this information with those responsible for public notice distribution and certification for your public drinking water system. For questions regarding public notification, please contact the Public Notice Coordinator at the Water Protection Program, Public Drinking Water Branch at 573-526-0425.

Upcoming Lead and Copper Rule Revisions

You have probably heard rumblings about changes to the Lead and Copper Rule. They are true; changes are on the horizon. The U.S. Environmental Protection Agency published proposed changes to the Lead and Copper Rule in the Federal Register on Oct. 10, 2019. The public comment period yielded more than 80,000 comments. EPA reviewed them and published the final rule on Jan. 15, 2021. The rule was to become effective March 16, 2021, but the new administration delayed the effective date to allow for additional public comment. The new effective date is set for Dec. 16, 2021. EPA will be reviewing the comments and feedback they received on the rule and may decide to go ahead with the original final rule as published, or modify the rule, which would require additional public comment and result in further delay of the effective date.

In either of the scenarios mentioned above, one thing likely not to change is the requirement for Lead Service Line (LSL) inventories. The current rule requires submission of initial LSL inventories to the state by Oct. 16, 2024, with updated inventories required to be submitted either annually or every three years in accordance with the lead and copper sampling schedule of the system. All community and non-transient non-community water systems will be required to submit LSL inventories. This is something that water systems can and should be working on now. Doing so will go a long way when the time comes to submit it to the state. The current rule will require water systems to inventory all service lines and identify lines as either lead, galvanized, not lead, or unknown. Developing the LSL inventory will be a long and time-consuming task. The initial inventory should provide a determination for as many service lines as possible, but it is possible to list lines as unknown. The water system should update their LSL inventory as the system identifies them through efforts such as repairs and maintenance. The LSL inventory will include system-owned and customer-owned portions of the service line materials.

To begin an inventory, the water system may begin with existing records for service lines. These records can include items such as the age of homes constructed in the area, permits, plumbing codes, maps, master plans, meter installations, service connections, distribution system inspections that may indicate materials used in service lines and others. Although these methods will help, some service lines will need visual verification in order to make the determination. When construction occurs that exposes service lines, water system personnel should record the materials used at each service, even if the line is not lead. When doing meter readings or replacing meters that allow a visual inspection of service lines, water system personnel should record the materials in use. In the end, the goal is to have every service line identified on both sides of ownership as lead, galvanized requiring replacement or not lead. There should not be any unknown service lines when all evaluations are complete. Those identified as not lead will need to have a record of what the material is. Documenting the material composition verifies each service line has had an evaluation and the material composition of each is known.

Don't worry, help is on the way. EPA, DNR and other trade organizations will provide training and guidance once the rule becomes effective. Although definitions, categories, when to submit inventories and the format required to report the inventory to the state may change, a LSL inventory will still be required. So, start now. Know what is in the ground, so when the time comes to develop your inventory you have information collected and ready to go. In the end, you will be happy you did.

Check Your Training Hours

Certified operators are encouraged to access training reports by visiting the department's website. To log in, the password is the last four digits of your social security number.

You can check training hours, renew certificates online, view and update contact information for public drinking water systems, including the chief operator, sample collector and administrative contact.

For more information, contact the department's Operator Certification Section at 800-361-4827 or 573-751-1600.

Try Out Our New Website to Find Training and Exam Dates

The Missouri Department of Natural Resources has redesigned and reorganized its website to improve the customer experience and allow users to find the information they need easier and faster. The department's new website continues to be hosted as dnr.mo.gov.

Aside from a completely new look, users will notice the website content has ben reorganized based on areas of focus, such as air, waste and recycling, water, energy, state parks and general topics. The new website was also built with mobile optimization in mind, allowing content to flow easily between desktop and mobile devices. Popular services such as permitting, financial opportunities, public notices, monitoring and reporting will be prominently displayed in a Popular Services menu.

The department's Operator Certification page features a new format for viewing upcoming training and allows operators to search for courses by date and location. To find the Operator Certification page, select the Water tab from the department's main page to find a list of upcoming training and exam dates.

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